

NIDDK-NIEHS Workshop on Chronic Kidney Diseases in Agricultural Communities

June 25-26, 2018

Poster Listing

Poster 1: Characterizing chronic kidney disease of unknown etiology in Sri Lanka: common clinical features in a prospective biopsy-based study

Shuchi Anand, Maria E. Montez-Rath, Dinuka Adasooriya, Neelakanthi Ratmatunga, Neeraja Kambham, Abdool Wazil, Sulcohana Wijetunge, Zeid Badurdeen, Charaka Ratnayake, Nishamani Karunasena, Stephen L. Schensul, Penny Valhos, Lalarukh Haider, Vivek Bhalla, Adeera Levin, Paul H. Wise, Glenn M. Chertow, Michele Barry, Andrew Z. Fire and Nishantha Nanayakkara

Poster 2: A Research-to-Practice Approach to Promoting Health and Safety among Sugarcane Workers: Implementation and Evaluation

Lyndsay Krisher, Claudia Asensio, Alex Cruz, Jaime Butler-Dawson, Miranda Dally, Diana Jaramillo and Lee Newman

Poster 3: A Review into Environmental Factors Impacting Drinking Water Sources in CKDu-affected Regions in Sri Lanka: An Isotopic Tracer Approach

Karina Meredith and Richard B. Banati

Poster 4: Incidence and Risk Factors of Acute Kidney Injury in Sugarcane Workers in Guatemala

Jaime Butler-Dawson, Miranda Dally, Lyndsay Krisher, Cecilia Sorensen, Claudia Asensio and Lee S. Newman

Poster 5: Unadjusted Point-of-Care Creatinine Results Overestimate Acute Kidney Injury Incidence during Field Testing in Guatemala

Benjamin R. Griffin, Jaime Butler-Dawson, Miranda Dally, Lyndsay Krisher, Alex Cruz, David Weitzenkamp, Cecilia Sorensen, Liliana Tenney, Richard J. Johnson and Lee S. Newman

Poster 6: KIM-1 as an Early Biomarker of Kidney Injury in Agricultural Communities in Sri Lanka

Mariana Cardenas-Gonzalez, Mangala De Silva, Dilini Eakanayake, Gayani Wanniarachchi, Sudheera Jayasinghe, Ediriweera Chandana, Channa Jayasumana, Sisira Siribaddana, Nandita Sraioshy, Venkata Sabbiseti and Joseph V. Bonventre

Poster 7: The Impact of Heat and Impaired Kidney Function on Productivity of Guatemalan Sugarcane Workers

Miranda Dally, Jaime Butler-Dawson, Lyndsay Krisher, Andrew Monaghan, David Weitzenkamp, Cecilia Sorensen, Richard J. Johnson, Elizabeth J. Carlton, Claudia Asensio, Liliana Tenney and Lee S. Newman

Poster 8: Design of a Population-Based Survey of CKDnT in Rural Guatemala

Eloin Dhaenens, Ann Miller, Joaquin Barnoya, Anita Chary, Carlos Mendoza and Peter Rohloff

Poster 9: Pilot Test of the DEGREE Protocol, CKDu Module, and Point-of-Care Device Measurements in Outdoor Hispanic Workers

Erika Figueroa-Solis, George L. Delclos and David Gimeno Ruiz de Porras

Poster 10: Current Occupational Heat and Pesticide Research in Southeastern Coastal States

Joan Flocks, Joseph Grzywacz, Jose Antonio Tovar, Linda McCauley, Valerie Mac, Roxana Chicas, Christopher Vulpe, Stephen Roberts and Nancy Denslow

Poster 11: Mouse Population Models Enable Clinically Relevant Evaluation of Kidney Injury Biomarker Performance

Alison H. Harrill, Julia Tobacyk, Haixia Lin and John C. Seely

Poster 12: Developing a Case Definition for Chronic Kidney Disease of Uncertain Etiology in Sri Lanka
Eranga Wijewickrama, Nalika Gunawardena, Saroj Jayasinghe and Chula Herath

Poster 13: Heat Stress as the Main Cause of Chronic Kidney Disease in Agricultural Communities—
Seven Arguments against the Hypothesis

Chula Herath, Channa Jayasumana, P. Mangala C.S. de Silva, Sisira Siribaddana and Marc E. De Broe

Poster 14: Investigating the Role of Household Behavior in Responding to CKDu in Sri Lanka
Soumya Balasubramanya and Ted Horbulyk

Poster 15: Modeling-Based Framework for Analysis of Potential Toxin Pathways through Water Storage and Distribution Systems to Address Some Aspects of Chronic Kidney Disease with Unknown Etiology (CKDu) in Sri Lanka

Tissa Illangasekare, Kathy James, Danny Reible, Wendy Zhou and Balaji Rajagopalan

Poster 16: Short- and Long-term Changes in Liver and Kidney Functions among Adolescent Pesticide Applicators across Three Years

Ahmed Ismail, Olfat Hendy, Gaafar Abdel Rasoul, Kai Wang, James Olson, Matthew Bonner and Diane Rohlman

Poster 17: The Association between Exposure to Nephrotoxic Metals in Drinking Water and Acute Kidney Injury and Chronic Kidney Disease in Rural Colorado

Katherine A. James, Richard Johnson and Richard Hamman

Poster 18: Adapting to a Hot Environment: Intervention with Guatemalan Farm Workers

Lyndsay Krisher, Jaime Butler-Dawson, Diana Jaramillo, Miranda Dally, Claudia Asensio, Alex Cruz and Lee Newman

Poster 19: Chronic Interstitial Nephritis in Agricultural Communities (CINAC) Is Strongly Associated with Pesticides

Channa Jayasumana, Mangala de Silva, Chula Herath and Marc De Broe

Poster 20: Initial Screening for Kidney Impairment among Processing Plant Workers at a Sugarcane Mill in Guatemala

Jaime Butler-Dawson, Lyndsay Krisher, Miranda Dally, Claudia Asensio and Lee S. Newman

Poster 21: Harmonizing Approaches to Chronic Kidney Disease of Unknown Etiology (CKDu): Addressing This Emerging Global Non-Communicable Disease Epidemic

Keith E. Levine, James M. Harrington, Jill Lebov, Daniel Lapidus, Reshan A. Fernando, Myles F. Elledge, Rajitha Wickremasinghe, Kamani P. Wanigasuriya, Pathmalal M. Manage and Jennifer H. Redmon

Poster 22: Physiologic and Environmental Monitoring of Heat Hazards in the Girasoles Study of Florida Farmworkers

Valerie Mac, Jacqueline Mix, Lisa Elon, Abby Mutic, Katherine Peterman, Nathan Mutic, Antonio Tovar-Aguillar, Eugenia Economos, Vicki Hertzberg and Linda McCauley

- Poster 23:** Acute Kidney Injury in Florida Agricultural Workers
Jacqueline Mix, Lisa Elon, Valerie Vi Thien Mac, Joan Flocks, Eugenia Economos, Antonio J. Tovar-Aguilar, Vicki Stover Hertzberg and Linda McCauley
- Poster 24:** Work Intensity and Work Tasks in Florida Agricultural Workers
Jacqueline Mix, Lisa Elon, Joan Flocks, Eugenia Economos, Antonio J. Tovar-Aguilar, Vicki Stover Hertzberg and Linda McCauley
- Poster 25:** First Report of a Newly Recognized Endemic Region of “Chronic Kidney Disease of Undetermined Etiology (CKDu)” in Tamil Nadu, South India
Sreejith Parameswaran, P. K. Rinu, Stina B. Manjila, Sitanshu Sekar Kar, Harichandrakumar, Satish Haridasan, P. S. Priyamvada and Jai Radhakrishnan
- Poster 26:** CKD Research Group at Boston University: Past and Current Projects
Zoe E. Petropoulos, Daniel R. Brooks, Michael D. McClean, David J. Friedman, Juan Jose Amador, Jessica H. Leibler, Sinead A.N. Keogh and Madeleine K. Scammell
- Poster 27:** Contributing Factors to the Rate of Progression of Chronic Kidney Disease of Unknown Etiology (CKDu) in Sri Lanka; an Interdisciplinary Approach
Stephen L. Schensul, Nishantha Nanyakkara, Penny Vlahos, Lalarukh Haider, Shuchi Anand and Jonathon Hastings
- Poster 28:** Evaluating the Occupational and Lifestyle Risk Factors among Chronic Kidney Disease of Unknown Etiology (CKDu) Patients in the North Central Province of Sri Lanka
Tanya Seneviratne and N. Kyle Steenland
- Poster 29:** Gramoxone/Paraquat-induced CKD in Experimental Animals: Relevance to CKDu.
Qingtian Li, Lei Fan, Luping Huang, Yi Tang, Jenny Szu-Chin Pan, Luan D Truong and David Sheikh-Hamad
- Poster 30:** Survey of Migrant Dialysis Patients Discloses a Majority with Paraquat or Other Agrochemical exposure: A Potential Etiology for CKDu
Michael W. Holliday, Jose R. Dominguez, Edlyn G. Bustamante, Ilse M. Espina, Maulin Shah, Samaya Qureshi, Ahmed Arslan Awan, and David Sheikh-Hamad
- Poster 31:** The Effects of Heat Stress: Biomarkers of Cross-Shift Decline in Renal Function among Guatemalan Sugarcane Workers
Cecilia Sorensen, Jaime Butler-Dawson, Miranda Dally, Lyndsay Krisher, Richard Johnson, Claudia Asensio and Lee S. Newman
- Poster 32:** Chronic Kidney Disease of Unknown Aetiology (CKDu) in Sri Lanka: Turning a Topology of Risk into a Topology of Resilience
Richard B. Banati and Katrina Van De Ven
- Poster 33:** Etiology, Diagnosis, and Cell Biological Mechanism of CINAC: Ongoing and Future Plans
Benjamin A. Vervaet, Gerd Schreurs, Matthias Cuyckx, Adrian Covaci, Stuart Maudseley, Cynthia C. Nast, Channa Jayasumana, Chula Herath, Swarnalata Gowrishankar, Christiane Mousson, Rajewea Dassanayake, Sharon G. Adler, Patrick C. D’Haese and Marc E. De Broe

Poster 34: Evidence That Chronic Interstitial Nephritis in Agricultural Communities (CINAC) Is a Toxin-induced Proximal Lysosomal Tubulopathy Involving Calcineurin Inhibition

Benjamin A. Vervaet, Cynthia C. Nast, Channa Jayasumana, Gerd Schreurs, Frank Roels, Chula Herath, Swarnalata Gowrishankar, Christiane Mousson, Rajeewa Dassanayake, Carlos M. Orantes, Patrick C. D'Haese and Marc E. De Broe

Poster 35: Toward a Standardized Histological Identification of Patients with Chronic Interstitial Nephritis in Agricultural Communities: Methods and Pitfalls in Microscopic Diagnosis

Gerd Schreurs, Cynthia C. Nast, Channa Jayasumana, Frank Roels, Chula Herath, Swarnalata Gowrishankar, Christiane Mousson, Rajeewa Dassanayake, Carlos M. Orantes, Patrick C. D'Haese, Marc E. De Broe and Benjamin A. Vervaet

Poster 36: *In vitro* 3-D Human Renal Tubular Organoids Generated from Urine-derived Stem Cells for Potential Use in Nephrotoxic Drug Development

Lei Dou, Haibin Guo, Fangpong Shu, Liang Chen, Xiong Geng, Guodong Li, Jan Rohozinsk, Anthony Atala, and Yuanyuan Zhang

Poster 37: The WE/Adelante Initiative – Building an Evidence Base to Inform Work Practices that Protect Agricultural Workers in Hot Environments

Ilana Weiss, Catharina Wesseling, Rebekah A.I. Lucas, Jason Glaser, Kristina Jakobsson, Paul Harvey, Olov Eriksson, Sandra Perazza and David H. Wegman

Selected Posters on Relevant Tools and Methods of Interest

The following eight posters can be found in the main plenary meeting room. They represent selected tools, general resources and methods that the meeting organizers felt would be of interest to the participants of this workshop.

Poster M1: Recruitment of Farmworkers for Field Studies in California (English and Spanish)

Marc B Schenker – University of California – Davis

Poster M2: The PhenX (consensus measures for Phenotypes and eXposures) Toolkit

Erin M. Ramos – National Human Genome Research Institute, NIH

Poster M3: The Children's Health Exposure Analysis Resource

David Balshaw, Caroline Dilworth, Kimberly Gray, Bonnie Joubert, Cindy Lawler, Daniel Shaughnessy, Claudia Thompson, Gwen Collman

Division of Extramural Research and Training, National Institute of Environmental Health Sciences, NIH

Poster M4: Novel Biomarkers at the Mount Sinai CHEAR Lab Hub Developmental Core

Manish Arora, Christine Austin, Lauren Petrick, Megan Niedzwiecki, SyamS. Andra, Kasey Brennan, Andrea Baccarelli, Robert Wright

The Institute of Exposomic Research at Mount Sinai, Department of Environmental Medicine and Public Health, Icahn School of Medicine at Mount Sinai

Department of Environmental Health Sciences, Columbia University Mailman School of Public Health

Poster M5: Advancing Direct Reading and Sensor Technologies for Occupational Health

Mark D. Hoover, John Snawder, Emanuele Cauda, Samuel E. Glover

Respiratory Health Division and NIOSH Center for Direct Reading and Sensor Technologies,
National Institute for Occupational Safety and Health, CDC

Poster M6: Occupational Exposure to Vapor-Gas, Dusts, and Fumes Among Rural Residents

Michael Humann, Brent Doney, Kevin Kelly, Paul Henneberger

Respiratory Health Division, National Institute for Occupational Safety and Health, CDC
Department of Occupational and Environmental Health, College of Public Health, The University
of Iowa

Poster M7: The Kidney Precision Medicine Project

Division of Kidney, Urologic and Hematologic Diseases, National Institute of Diabetes and
Digestive and Kidney Diseases, NIH

Poster M8: The NIDDK Sample and Data Repository

Division of Kidney, Urologic and Hematologic Diseases, National Institute of Diabetes and
Digestive and Kidney Diseases, NIH